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PATENT FAMILY SEARCH FOR JP 02-237220

Subaccount 13361-049JP1

SOURCES:

Selected file: PLUSPAT

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Last update of file: 2006/02/22 (YYYY/MM/DD) 2006-07/UP (last update)

Selected file: WPAT

Derwent World Patents Index, (c) Thomson Scientific
UP (basic), UE(equiv), UA (poly), UB (chem) : updates through 2006-12
Manual Code Revision 2006 - final lists available on Thomson Scientific
Website. Revised codes will be implemented in the first update of 2006.
Please review lists to update manual codes in SDIs and stored searches.
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Selected file: INPD

INPADOC International Patent Documentation Center
Source: European Patent Office - EPIDOS
Individual publication stage records for each Patenting Authority
Coverage: 75 patent offices ; start dates vary from 1968 forward
Current through weekly update 2006-07/up ; last update 2006/02/17
IPC Classes: for searching prior to 2006, use the qualifier: /IC
For searching IPC v8 (pd>=2006), use the qualifiers: /ICAA /ICCA

Selected file: USPAT

US Patents Full Text of United States Patent and Trademark Office
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For complete file information : see INFO USPAT
NEW 09/09/03 Kind Code for US Design patents from D to S1

Selected file: USAPPS

US Patent Applications full-text from USPTO (c) Questel.Orbit
Coverage: from beginning of Pre-Grant publication in March 2001
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Thru PGP pd=2006-02-16 (2006-07/up); Grant PD=2006-02-21 (2006-08/up)
Std Biblio thru PGP PD=2001-11(2002-11/uam);Grant PD=2005-06(2006-02/UM)
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Reloaded 01/15/04 with Updated US Classes, & Business Terms(/BT)
From 06/04 forward questionable source data received from USPTO shows
PCT filing date, not date of national stage as app date for US patents
that entered via PCT route. IFI is investigating.

PATOLIS-e

PATENT FAMILY

#	Patent No.	Kind	Date	Applic.No.	Date
1)	JP02237220	A	19900919	1989JP-0056942	19890309

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 1989JP-0056942 19890309

SEARCH RESULTS:

1 / 1 PLUSPAT - QUESTEL-ORBIT - image
 Patent Number :
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 Publication Stage :
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 (A) OUTPUT CIRCUIT
 Patent Assignee :
 (A) FUJITSU LTD
 Patent Assignee :
 (A) FUJITSU LTD
 Inventor(s) :
 (A) HIROCHI KATSUJI
 Intl Patent Class :
 (A) H01L-027/06 H03K-017/16 H03K-017/56 H03K-019/08
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 Inventor: HIROCHI KATSUJI
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 05
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 Title of Invention: OUTPUT CIRCUIT

Abstract: PURPOSE: To set the fall change of an output signal to be gradual
 1 and to evade the ringing of the waveform of an output fall by increasing a
 base current supplied to an L level driving means stepwise. CONSTITUTION: W
 hen the output of an input circuit changes from a first potential state to a
 second potential state, a first base current ia is firstly generated, the L
 level driving means is operated by the first base current ia and the potent
 ial of an output terminal is changed from an H level to an L level. When the
 potential of the output terminal reaches a prescribed potential, second bas
 e currents il-in are generated and they are added to the first base current
 ia. Since the base current IB is added with the lapse of time so as to incre
 ase them stepwise, the fall change of the output signal comes to gradual and
 the occurrence of the ringing of the output fall waveform can be evaded.COP
 YRIGHT: (C)1990,JPO&Japio

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 Retroactive Date: []
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 Final Examinational Transaction/Date:
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 (A7D2 1992/ 9/28,NOTIFICATION OF LUMP CHANGE IN DOMICILE (REPRESENTATIVE),
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 (A7D2 1993/ 8/20,NOTIFICATION OF LUMP CHANGE IN DOMICILE (REPRESENTATIVE),
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 (A7D2 1995/ 4/ 5,NOTIFICATION OF LUMP CHANGE IN DOMICILE (REPRESENTATIVE),
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 (A7D2 1996/ 2/13,NOTIFICATION OF LUMP CHANGE IN DOMICILE (REPRESENTATIVE),
 :)

(A7D2 1996/ 2/13,NOTIFICATION OF LUMP CHANGE IN DOMICILE (REPRESENTATIVE),
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 (A7D1 1996/ 3/26,NOTIFICATION OF LUMP CHANGE IN DOMICILE (APPLICANT),
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 (A7D2 1996/ 3/26,NOTIFICATION OF LUMP CHANGE IN DOMICILE (REPRESENTATIVE),
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*** Trial No./Date: [] ***
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 Classification of Trial Decision of Opposition/Date:
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Amount of Annuity Payment: ()
 Extinction of Right/Lapse Date of Right:
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 Closed Register Filing Date: []
 Proprietor: -
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